

## MATERIAL SAFETY DATA SHEET (MSDS)

### Rubber Mulch

#### Section 1: Company and Product Identification

<b>Product</b>	: SBR Recycled Rubber Mulch
<b>Chemical Name</b>	: Styrene-Butadiene Rubber (SBR)
<b>Description</b>	: SBR shred (produced from recycling of used tyres)
<b>Company name</b>	: Australian Surfacing Supplies Pty Ltd
<b>Telephone</b>	: 1300 752 956
<b>Address</b>	: PO Box 604, Warragul, 3820 Victoria
<b>Email</b>	: sales@australiansurfacingssupplies.com.au
<b>Emergency Tel</b>	: 0438 223 564
<b>Other Emergency Tel</b>	: 0488 045 893

#### Section 2: Hazards Identification

<b>Emergency Overview</b>	: This product is stable at ambient condition. Products have a mild rubber odour and if ignited by excessive heat or open flame will burn. Smoke released will contain noxious and acrid compounds of sulphur. During fire conditions, smoke irritates the eyes and respiratory tract. SBR powder or dust may form explosive concentrations when mixed with sufficient quantities of oxygen.
<b>Potential Health Effects</b>	
<b>Eyes</b>	: Can cause mechanical irritation
<b>Skin</b>	: May cause slight irritation.
<b>Inhalation</b>	: Not a likely route of exposure.
<b>Ingestion</b>	: Not a likely route of exposure.

#### Section 3: Composition/Information on Ingredients

Chemical Name	CAS No.	Concentration
Natural Rubber	9006-04-6	60-100
Mineral oil, petroleum extracts, heavy paraffinic distillate solvent	66742-04-7	
Talc, Containing No Asbestos or Crystalline Silica	14807-96-6	
Zinc oxide	1314-13-2	
Sulfur	7704-34-9	

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#### Section 4: First Aid Measures

<b>Eye Contact</b>	: Do not rub eyes as particles may scratch the eye. Immediately rinse open eye with lukewarm, gently running water for at least 5-15 minutes. Use saline solution if available and take care not to contaminate unaffected eye. If eye irritation persists, seek medical attention.
<b>Skin Contact</b>	: Rinse thoroughly with lukewarm, gently flowing water and non-abrasive soap. If irritation occurs and/or persists, seek medical attention.
<b>Inhalation</b>	: Relocate to fresh air. Drink water to clear throat. Blow nose to remove dust..
<b>Ingestion</b>	: Only seek immediate medical help if large quantities have been ingested. NEVER give anything by mouth if victim is rapidly losing consciousness, is unconscious or convulsing. First Aid.
<b>Comments</b>	: This product will release toxic and irritating smoke if ignited by excessive heat or open flame. Smoke may contain noxious compounds and acrid compounds of sulphur. During fire conditions, smoke is irritating to the eyes and respiratory tract. Powder or dust may form explosive concentrations when mixed in sufficient quantities of air.
<b>Note to Physicians</b>	: This product is a mechanical irritant and is not expected to have any chronic effects for a single exposure. Treat exposure by removing source of irritation and treat symptomatically.

#### Section 5: Fire Fighting Measures

<b>Flammable Properties</b>	: Will burn when exposed to excessive heat or flame.
<b>Extinguishing Media</b>	: Carbon dioxide, foam, sand, water (recommended).
<b>Specific Hazards Arising from the Chemical</b>	: Unidentified hydrocarbons in smoke, oxides of sulphur and carbon.
<b>Fire Fighting Equipment/Instructions</b>	: Fight fire from upwind. During combustion, irritating and/or toxic gases and aerosols from decomposition products may be present. Move containers from fire area or cool with water spray, if possible. Firefighters must wear a full-body encapsulating chemical protective suit with positive-pressure self-contained breathing apparatus (SCBA).

#### Section 6: Accidental Release Measures

<b>Small/Large Spill</b>	: Personal Precautions: Use Personal Protective Equipment (PPE). Environmental Precautions: Use the PPE. Methods for Containment and Clean-up: If release of ground rubber results in the formation of dust, remove all sources of heat and/or ignition. Provide immediate and adequate ventilation. Contain spilled material for disposal or recycling. If sweeping is necessary, use dust suppression such as water. Do not dry sweep dust accumulation or use compressed air for clean-up. Material may be re-used in process if clean, otherwise collect in approved containers and dispose accordingly.
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#### Section 7: Handling & Storage

- Handling** : When handling product minimise dust formation. Keep away from sources of heat, flame or ignition. Add water to any spilled product before attempting a clean-up. Wash thoroughly after handling and launder contaminated clothing before re-use.
- Storage** : Ground all transfer and storage equipment and use only non-sparking tools and equipment. Store in a cool, dry, well-ventilated area away from ignition sources/sparks.

#### Section 8: Exposure Controls / Personal Protection

- Exposure Guideline Comments** : Natural Rubber: • ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average. 10 mg/m<sup>3</sup> (total dust) • OSHA = Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. TWA = Time-Weighted Average. 15 mg/m<sup>3</sup> • (mineral oil, petroleum extracts, heavy paraffinic distillate solvent) • OSHA = Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. TLV® = Threshold Limit Value. 5 mg/m<sup>3</sup> (mist) Carbon Black: • ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold • Limit Value. TWA = Time-Weighted Average. 3.5 mg/m<sup>3</sup> • OSHA = Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. TWA = Time-Weighted Average. 3.5 mg/m<sup>3</sup> Zinc Oxide • ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average. 10 mg/m<sup>3</sup> • OSHA = Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. TWA = Time-Weighted Average. 5 mg/m<sup>3</sup> (total dust) Sulphur: • ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average. 10 mg/m<sup>3</sup>.
- Engineering Controls** : Use general or local exhaust ventilation to maintain exposure below the exposure limits. If heated during processing, provide adequate non-sparking ventilation to minimize fumes in the workplace.
- Skin Protection** : As supplied, the extender oil is bound in a polymer matrix and exposure to skin should only be trace quantities or less. If prolonged contact is involved, care should be taken to minimize exposure by preventing contact with skin. Impervious footwear is required by work site rules. Frequent washing of exposed areas is recommended. Safety shower is recommended in the workplace area.
- Eye Protection** : Wear chemical safety glasses with side shields when contact is possible. Contact lenses are not recommended. Ensure an eyewash station and safety shower are available in immediate work area.
- Respiratory Protection** : Under normal conditions of use, respiratory protection is not necessary. If dusting is an occurrence during processing, then use of a particulate N95 respirator is recommended.

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#### Section 9: Physical & Chemical Properties

<b>Physical State</b>	: Solid	<b>Melting Point</b>	: Not available
<b>Appearance</b>	: Black / Coloured Granules	<b>Freezing Point</b>	: Not available
<b>Particle Size</b>	: Not Available	<b>Relative Density</b>	: 0.95 - 1.40
<b>Odour</b>	: Mild Rubber	<b>9Water = 1)</b>	
<b>Odour Threshold</b>	: Not Available	<b>Bulk Density</b>	: Not available
<b>Molecular Formula</b>	: Not Available	<b>Solubility in Water</b>	: Insoluble
<b>Molecular Weight</b>	: Not Available	<b>Solubility in Other</b>	: Not available
<b>Boiling Point</b>	: Not available	<b>Liquids</b>	
<b>Decomposition</b>	: Not available	<b>pH Level</b>	: Not applicable
<b>Temperature</b>		<b>Partition Coefficient,</b>	: Not available
<b>Viscosity - Kinematic</b>	: Not available	<b>n-Octanol/Water</b>	
<b>Surface Tension</b>	: Not available	<b>Evaporation Rate</b>	: Not applicable
<b>Vapour Pressure</b>	: Not applicable	<b>Flash Point</b>	: Not applicable
<b>Vapour Pressure at 50</b>	: Not available	<b>Lower Flammable /</b>	: - 25%
<b>deg C</b>		<b>Explosive Limit</b>	
<b>Saturated Vapour</b>	: Not available	<b>Upper Flammable /</b>	: Not applicable
<b>Concentration</b>		<b>Explosive Limit</b>	
<b>Critical Temperature</b>	: Not available	<b>Auto-ignition</b>	: 370-450°C
<b>Vapour Density (air = 1)</b>	: Not applicable	<b>Temperature</b>	
		<b>Electrical Conductivity</b>	: Not available

#### Section 10: Stability & Reactivity

<b>Chemical Stability</b>	: This product is stable and is not reactive.
<b>Hazardous Polymerization</b>	: Will not occur.
<b>Conditions to Avoid</b>	: Avoid strong oxidizing agents Incompatible Materials Strong oxidizing agents Hazardous Decomposition Products Carbon monoxide, carbon dioxide, hydrogen, hydrogen sulphide, pentadiene, benzene, xylene, carbon, ash, oxides of sulphur and nitrogen, zinc oxide, and numerous unidentified organic compounds..

#### Section 11: Ecological Information

Environmental fate of this material is not available. Eco toxicity the ecological risk associated with the use of ground rubber in playgrounds has been investigated in several studies by evaluating the impact of leachates on aquatic life. In the majority of these studies, zinc was identified as the most likely toxic constituent. Aging of the rubber material and dilution from natural systems in which the species live is likely to prevent toxic effects. Research is ongoing.

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#### Section 12: Toxicological Information

This product is a mechanical irritant and is not expected to have any chronic effects for a single exposure. • ACGIH TLV- TWA 0.0001 mg/m<sup>3</sup> (inhalable, skin) DTLVS\* The Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs) booklet issues by American Conference of Governmental Industrial Hygienists (ACGIH), Cincinnati, OH, 1996 Volume(issue)/page/year: TLV/BEI,2010 Skin Irritation/Corrosion Not a skin irritant. There is evidence that contact with ground rubber may aggravate pre-existing dermatitis. Eye Irritation/Corrosion General irritation occurs when a foreign object contacts with the eye. Redness, itchiness and tearing may result. Effects of Short-Term (Acute) Exposure Inhalation Based on animal tests. Inhalation of fine particles may cause mild irritation of the respiratory tract. Fumes generated during processing may be mildly irritating to the eyes and respiratory tract. Ingestion The acute effects of ingestion of rubber have not been determined. Effects of Long-Term (Chronic) Exposure Prolonged contact with untreated naphthenic/aromatic oils caused skin cancer in mice when applied over a twoyear period. Carcinogenicity Untreated naphthenic/aromatic oils are classified as carcinogenic to humans by IARC. Some countries require the "R45" designation due to the presence of this oil. Some rubber contains nitrosamines which have also been shown to be carcinogenic to animals in the laboratory. Teratogenicity / Embryo toxicity Does not cause harm to the unborn child. This product is not known to contain any components at >=0.1% that have been shown to cause reproductive toxicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a reproductive toxin.

#### Section 13: Disposal Considerations

Reuse or recycle material whenever possible. Place used and contaminated material and packaging into suitable containers. Dispose of in accordance with government regulations..

#### Section 14: Transport Information

Shipping Information: Not regulated Other Transport Information: Not applicable Special Shipping: Not applicable

#### Section 15: Regulatory Information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

#### Section 16: Disclaimer

The above information is derived from periodic tests taken on actual product from the manufacturing process. Some variances in specifications and raw surface appearances are possible due to the use of recycled materials and our manufacturing tolerances. In practice, the difference in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The recommendation relating to the application and end use of PlayKote products, are given in good faith, based on PlayKotes' current knowledge and experience of the product when properly stored, handled and applied under normal conditions in accordance with PlayKotes' recommendations. The user of the product must test the product's suitability for intended application and purpose. All orders are accepted subject to our current Terms and Conditions of Sales and delivery. Users must refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

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